

## IV. SUMMARY OF THE OPERATIONS OF THE OLD-AGE AND SURVIVORS INSURANCE AND DISABILITY INSURANCE TRUST FUNDS, FISCAL YEAR 1987

### A. OLD-AGE AND SURVIVORS INSURANCE TRUST FUND

A statement of the income and disbursements of the Federal Old-Age and Survivors Insurance Trust Fund in fiscal year 1987, and of the assets of the fund at the beginning and end of the fiscal year, is presented in table 2.

TABLE 2.—STATEMENT OF OPERATIONS OF THE OASI TRUST FUND  
DURING FISCAL YEAR 1987  
[In thousands]

Total assets, September 30, 1986.....		\$37,519,378
<b>Receipts:</b>		
Contributions:		
Appropriations:		
Employment taxes.....	\$192,601,710	
Tax credits.....	1,652,655	
Total appropriations.....	194,254,366	
Deposits arising from State agreements.....	5,324,577	
Payment from general fund of the Treasury representing employee-employer contributions on deemed wage credits for military service in 1987.....	348,391	
Gross contributions.....	199,927,333	
Less payment to the general fund of the Treasury for contributions subject to refund.....	373,170	
Net contributions.....		199,554,163
Income from taxation of benefit payments:		
Withheld from benefit payments to non-resident aliens.....	66,717	
All other, not subject to withholding <sup>1</sup> .....	3,258,000	
Total income from taxation of benefits.....		3,322,717
Reimbursement from general fund of the Treasury for costs of payments to uninsured persons who attained age 72 before 1968.....		69,394
Investment income and interest adjustments:		
Interest on investments.....	4,496,366	
Interest on transfers from the general fund account for the Supplemental Security Income program due to adjustment in allocation of administrative expenses.....	1,098	
Gross investment income and interest adjustments.....	4,497,463	
Less interest on interfund transfers due to adjustment in allocation of administrative expenses.....	2,510	
Less interest on general fund advance tax transfers.....	625,017	
Net investment income and interest adjustments.....		3,869,936
Income from merger of the Northern Mariana Islands Social Security Retirement Fund with the United States Social Security program.....		29,434
Gifts.....		454
Total receipts.....		206,846,097

**APPENDIX F.—PROJECTED COST AS A PERCENTAGE OF GNP FOR THE OASI,  
DI, AND HI PROGRAMS**

In this appendix, the estimated cost of the OASI, DI, and HI programs is presented as a percentage of the gross national product (GNP). While expressing estimated cost as a percentage of taxable payroll is the most useful approach for assessing the financial status of the programs, (see table 26 and Appendix E), analysis of cost as a percentage of GNP provides an additional perspective on the cost of the programs in relation to the total value of goods produced and services performed in the U.S. economy.

Table F1 presents estimated OASI, DI, and HI costs as percentages of GNP on the basis of the four alternative sets of assumptions. For the next 20 years, the combined OASI and DI cost—hereafter referred to as the OASDI cost—as a percentage of GNP is projected to decline on the basis of alternatives I, II-A, and II-B, and to remain about level on the basis of alternative III. The projected HI cost as a percentage of GNP, however, increases through 2005 under all four alternatives. The combined OASDI and HI cost as a percentage of GNP is projected, for the next 20 years, to decrease based on alternative I, to remain about level based on the intermediate sets of assumptions (alternatives II-A and II-B), and to increase based on alternative III. Between 2005 and about 2035, both the OASDI and the HI costs as percentages of GNP are projected to rise substantially based on all four alternatives because of the baby-boom generation reaching retirement age. After 2035, the HI cost as a percentage of GNP is projected to stabilize, and the OASDI cost as a percentage of GNP is projected to decline slightly or to stabilize, except under alternative III, for which OASDI cost as a percentage of GNP is projected to continue rising. The combined OASDI and HI cost as a percentage of GNP is projected, after 2035, to follow the pattern of its largest component, the OASDI cost, changing only slightly on the basis of alternatives I, II-A, and II-B, while increasing significantly on the basis of alternative III.

The combined costs of the OASDI and HI programs as percentages of GNP, based on the four alternatives, differ by a relatively large amount at the end of the long-range period (about 7.8 percentage points between alternatives I and III in 2060), while differing by a much smaller amount at the end of the medium-range period (2.6 percentage points in 2010). In addition, the combined long-range cost as a percentage of GNP varies by a relatively large amount (from 6.18 percent based on alternative I, to 10.35 percent based on alternative III), while the medium-range cost varies by a much smaller amount (from 5.36 to 6.92 percent). Summarized cost rates are calculated on the level-financing basis including the trust fund balances on January 1, 1988. (See section 5 for explanation.)

TABLE F1.—ESTIMATED COST OF THE OASI, DI, AND HI PROGRAMS AS A PERCENTAGE OF GNP BY ALTERNATIVE AND TRUST FUND, CALENDAR YEARS 1988-2062

Calendar year	OASI	DI	OASDI	HI	Total OASDI and HI
<b>Alternative I:</b>					
1988	4.18	0.46	4.64	1.13	5.77
1989	4.12	.45	4.57	1.13	5.70
1990	4.07	.44	4.51	1.16	5.67
1991	4.02	.43	4.45	1.18	5.63
1992	3.97	.42	4.40	1.20	5.59
1993	3.91	.42	4.33	1.21	5.54
1994	3.86	.42	4.28	1.22	5.49
1995	3.81	.42	4.23	1.23	5.45
1996	3.76	.42	4.18	1.23	5.41
1997	3.71	.43	4.13	1.24	5.37
2000	3.56	.44	4.00	1.24	5.24
2005	3.40	.48	3.87	1.23	5.10
2010	3.46	.54	4.00	1.22	5.22
2015	3.84	.57	4.41	1.22	5.63
2020	4.36	.58	4.94	1.27	6.21
2025	4.75	.61	5.35	1.36	6.72
2030	4.94	.59	5.54	1.45	6.99
2035	4.93	.57	5.50	1.52	7.02
2040	4.77	.57	5.34	1.56	6.89
2045	4.63	.58	5.21	1.58	6.79
2050	4.57	.58	5.16	1.59	6.75
2055	4.55	.58	5.13	1.61	6.74
2060	4.51	.57	5.09	1.63	6.72
<b>Summarized rates:<sup>1</sup></b>					
25-year: 1988-2012	3.68	.46	4.15	1.21	5.36
50-year: 1988-2037	4.10	.52	4.62	1.29	5.91
75-year: 1988-2062	4.26	.54	4.80	1.38	6.18
<b>Alternative II-A:</b>					
1988	4.20	.47	4.67	1.14	5.81
1989	4.16	.46	4.62	1.16	5.78
1990	4.14	.46	4.60	1.20	5.80
1991	4.12	.45	4.57	1.24	5.80
1992	4.08	.45	4.53	1.27	5.79
1993	4.04	.45	4.49	1.30	5.79
1994	4.00	.45	4.45	1.33	5.78
1995	3.97	.45	4.42	1.36	5.78
1996	3.93	.46	4.39	1.39	5.78
1997	3.89	.47	4.36	1.41	5.77
2000	3.78	.49	4.27	1.49	5.76
2005	3.66	.55	4.20	1.58	5.79
2010	3.75	.62	4.37	1.70	6.07
2015	4.18	.67	4.85	1.85	6.69
2020	4.79	.69	5.48	2.08	7.55
2025	5.31	.72	6.03	2.35	8.38
2030	5.65	.71	6.36	2.59	8.95
2035	5.76	.69	6.45	2.73	9.19
2040	5.71	.69	6.40	2.80	9.20
2045	5.66	.72	6.38	2.82	9.20
2050	5.70	.72	6.42	2.84	9.26
2055	5.77	.72	6.48	2.86	9.34
2060	5.80	.71	6.50	2.88	9.38
<b>Summarized rates:<sup>1</sup></b>					
25-year: 1988-2012	3.88	.51	4.39	1.46	5.85
50-year: 1988-2037	4.46	.60	5.06	1.86	6.92
75-year: 1988-2062	4.83	.63	5.46	2.14	7.60

TABLE F1.—ESTIMATED COST OF THE OASI, DI, AND HI PROGRAMS AS A PERCENTAGE OF GNP BY ALTERNATIVE AND TRUST FUND, CALENDAR YEARS 1988-2062 (Cont.)

Calendar year	OASI	DI	OASDI	HI	Total OASDI and HI
<b>Alternative II-B:</b>					
1988	4.22	0.47	4.70	1.15	5.84
1989	4.20	.47	4.67	1.17	5.84
1990	4.22	.46	4.69	1.22	5.91
1991	4.22	.46	4.68	1.26	5.95
1992	4.20	.46	4.66	1.29	5.95
1993	4.17	.46	4.63	1.33	5.95
1994	4.14	.46	4.60	1.36	5.96
1995	4.11	.47	4.57	1.39	5.97
1996	4.07	.47	4.55	1.43	5.97
1997	4.04	.48	4.52	1.45	5.97
2000	3.95	.50	4.45	1.53	5.98
2005	3.83	.56	4.39	1.64	6.03
2010	3.91	.64	4.55	1.76	6.31
2015	4.34	.68	5.01	1.91	6.92
2020	4.95	.70	5.64	2.14	7.78
2025	5.46	.73	6.19	2.41	8.60
2030	5.81	.71	6.52	2.64	9.16
2035	5.91	.69	6.61	2.77	9.38
2040	5.85	.69	6.54	2.82	9.36
2045	5.77	.71	6.48	2.83	9.31
2050	5.78	.71	6.49	2.84	9.33
2055	5.82	.70	6.52	2.84	9.36
2060	5.82	.69	6.51	2.84	9.36
<b>Summarized rates:<sup>1</sup></b>					
25-year: 1988-2012	4.02	.52	4.55	1.50	6.05
50-year: 1988-2037	4.62	.61	5.23	1.91	7.13
75-year: 1988-2062	4.97	.64	5.61	2.18	7.79
<b>Alternative III:</b>					
1988	4.32	.50	4.82	1.17	5.99
1989	4.37	.50	4.87	1.21	6.08
1990	4.40	.50	4.90	1.28	6.18
1991	4.47	.52	4.99	1.34	6.33
1992	4.64	.54	5.18	1.42	6.60
1993	4.57	.54	5.11	1.47	6.57
1994	4.53	.55	5.08	1.53	6.61
1995	4.51	.55	5.06	1.60	6.66
1996	4.48	.57	5.05	1.66	6.71
1997	4.46	.58	5.04	1.72	6.76
2000	4.37	.60	4.97	1.91	6.89
2005	4.25	.68	4.93	2.23	7.16
2010	4.35	.77	5.12	2.61	7.73
2015	4.84	.83	5.66	3.10	8.77
2020	5.57	.86	6.43	3.74	10.17
2025	6.28	.91	7.18	4.44	11.63
2030	6.87	.90	7.77	5.03	12.80
2035	7.23	.88	8.11	5.35	13.46
2040	7.39	.89	8.28	5.44	13.71
2045	7.53	.93	8.45	5.43	13.88
2050	7.77	.94	8.71	5.41	14.11
2055	8.03	.93	8.96	5.39	14.35
2060	8.22	.90	9.13	5.37	14.50
<b>Summarized rates:<sup>1</sup></b>					
25-year: 1988-2012	4.40	.62	5.02	1.89	6.92
50-year: 1988-2037	5.20	.74	5.93	3.00	8.93
75-year: 1988-2062	5.90	.79	6.69	3.66	10.35

<sup>1</sup>Summarized rates are calculated on the level-financing basis including the value of the trust funds on January 1, 1988. (See section 5 for explanation.)

The difference between cost rates expressed as percentages of taxable payroll and those expressed as percentages of GNP can be seen by analyzing the estimated ratios of taxable payroll to GNP, which are presented in table F2. The cost as a percentage of GNP is approximately equal to the cost as a percentage of taxable payroll multiplied by the ratio of taxable payroll to GNP.

Projections of GNP for the first several years were based on assumed quarterly changes in real GNP and the GNP price deflator. Thereafter, projections of GNP were based on the projected increases in U.S. employment and labor productivity. Productivity projections are consis-

tent with assumed changes in the level of average earnings, the ratio of earnings to worker compensation, the ratio of worker compensation to GNP, and average hours worked per year.

Projections of taxable payroll, which are described in detail in Appendix A, were based on the projected increases in covered employment and average taxable earnings. Therefore, the projected increases in taxable payroll differ from projected increases in GNP primarily to the extent that average taxable earnings are assumed to increase more slowly than is productivity and to the extent that coverage of U.S. employment changes. For simplicity of presentation, table F2 is based on the projected OASDI taxable payroll even though the projected HI taxable payroll is somewhat larger because of the inclusion of the earnings of railroad employees and the more complete coverage of Federal, state, and local government employees.

TABLE F2.—RATIO OF TAXABLE PAYROLL TO GNP BY ALTERNATIVE,  
CALENDAR YEARS 1988-2060

Calendar year	I	II-A	II-B	III
1988	.436	.437	.437	.441
1989	.435	.435	.436	.436
1990	.433	.433	.433	.432
1991	.434	.433	.434	.433
1992	.434	.434	.433	.434
1993	.434	.434	.433	.431
1994	.435	.434	.434	.431
1995	.435	.434	.433	.432
1996	.435	.434	.434	.432
1997	.435	.433	.433	.432
2000	.436	.433	.432	.430
2005	.437	.433	.429	.425
2010	.438	.432	.426	.420
2015	.439	.430	.423	.415
2020	.439	.428	.419	.409
2025	.439	.426	.415	.403
2030	.439	.424	.411	.397
2035	.439	.422	.407	.391
2040	.439	.420	.403	.386
2045	.439	.418	.399	.380
2050	.439	.416	.395	.375
2055	.439	.414	.391	.369
2060	.439	.412	.388	.364

The long-range trend in the ratio of taxable payroll to GNP reflects the assumed trend in the ratio of wages to total employee compensation—i.e., wages plus fringe benefits. The ratio of wages to total employee compensation declined at average annual rates of 0.37 percent for the 30 years 1957-86, and 0.32, 0.61, and 0.19 percent for the 10-year periods 1957-66, 1967-76, and 1977-86, respectively. This ratio is assumed to stop its historical decline for alternative I, but to continue to decline ultimately by 0.1, 0.2, and 0.3 percent per year for alternatives II-A, II-B, and III, respectively.

Through 2015, however, the tendency toward decreases in the ratio of taxable payroll to GNP, discussed above, is at least partially offset by the gradually expanding OASDI coverage of Federal civilian employment resulting from the 1983 amendments. The ratio is projected to decrease slightly through 1990 for each alternative. For alternative I, the ratio of taxable payroll to GNP is projected to rise slightly between 1990 and 2010, thereafter remaining about the same. For alternative II-A, the ratio is projected to stay about the same from 1990 through 2005 before

beginning to decrease. For alternatives II-B and III, the ratio of taxable payroll to GNP is projected to stay about the same between 1990 and 1997 before beginning to decrease for the remainder of the long-range period.

**APPENDIX G.—LONG-RANGE ESTIMATES OF SOCIAL SECURITY TRUST FUND OPERATIONS IN DOLLARS**

This appendix presents long-range estimates of the operations of the combined Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) Trust Funds as well as projections of combined OASDI and Hospital Insurance (HI) tax income and outgo.

Long-range trust fund operations typically are not shown in dollar amounts because inflation makes such amounts noncomparable over time. Instead, relative measures which are comparable over time have been developed. Two examples of such measures are cost rates and income rates, which express the cost and income of the program as percentages of taxable payroll, as shown in table 26. Another is the trust fund ratio, which expresses the assets of the trust funds as a proportion of the outgo during a specific period of time, usually the next year, as shown in table 15. They are the year-by-year measures that have been used by Social Security program planners and legislators to evaluate the long-range actuarial status of the program and the long-range financial effect of proposed changes to the program.

Nonetheless, in view of the interest that continues to be expressed in long-range dollar values, this appendix presents long-range OASDI estimates in current dollars, together with several indices which can be used to convert current dollars into constant (1988) dollars. It should be emphasized that any comparison of recent or near-term trust fund operations to longer-term current-dollar estimates which do not reflect the very considerable effects of inflation—especially for a period extending 75 years into the future—would be very misleading.

Table G1 shows estimated operations of the combined OASI and DI Trust Funds—that is, income excluding interest, interest, total income, total outgo, and assets at the end of the year. These items are defined in footnotes to the table. The estimates are based on four sets of economic and demographic assumptions identified as alternatives I, II-A, II-B, and III, which are described in detail earlier in this report. The estimates of all these financial items are shown in current dollars.

A major consideration in converting current dollars to constant dollars is the selection of the index of conversion. Price indices adjust for the effects of price inflation. The price index used in this appendix is the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W, hereinafter referred to as "CPI"), which is published by the Bureau of Labor Statistics, Department of Labor. The CPI was chosen mainly because it is used to determine automatic increases in OASDI benefits.

Wage indices adjust for the combined effects of price inflation and real-wage growth. The particular wage index presented in this appendix is the "SSA average wage index," as defined in section 215(i)(1)(G) of the Social Security Act. This index is used to adjust many of the Social Security program amounts that are subject to automatic adjustment (such as the contribution and benefit base).

Payroll indices adjust for the effects of changes in the number of workers as well as for the effect of price inflation and real-earnings growth. This note presents the OASDI taxable payroll, which consists of all earnings subject to OASDI contribution rates, adjusted to include deemed wages based on military service and to reflect the lower effective contribution rates (compared to the combined employee-employer rate) which apply to multiple-employer "excess wages."

Also shown are values of the gross national product (GNP). In addition to reflecting all of the effects of the three types of indices discussed above—price, wage, and payroll indices—the GNP values also reflect the effects of other changes in the national economy. The values of the Implicit Price Deflator for the Gross National Product, based on the projected values shown for the GNP, are similar to the values shown for the CPI.

The application of an interest rate is another way of converting dollar values through time. The selection of an interest rate can be based on many types of investments, such as those by individuals, groups, or the Social Security trust funds. The particular series of interest-rate factors presented in this appendix is based on the average of the assumed annual interest rates for special public-debt obligations issuable to the trust funds in the 12 months of the year, under each alternative.

The CPI, after several years of varying increases, is assumed to increase annually at rates of 2.0, 3.0, 4.0, and 5.0 percent for alternatives I, II-A, II-B, and III, respectively. Similarly, the average annual wage is assumed to increase by 4.4, 4.9, 5.4, and 5.9 percent. After the first few years, no explicit assumption is made about GNP growth; rather, estimates thereof are based on the complex interaction of many economic and demographic variables. Similarly, the estimates of payroll growth are based on the interaction of many economic and demographic variables. Appendix A of this report includes a more complete discussion of the payroll estimates. The ultimate annual interest rates are assumed to be nominal rates, compounded semiannually, of approximately 5.0, 5.5, 6.0, and 6.5 percent, for alternatives I, II-A, II-B, and III, respectively. These assumptions are the result of the compound effect of the ultimate annual increases assumed for the CPI (2.0, 3.0, 4.0, and 5.0 percent) with the respective ultimate real interest rates assumed (effective annual rates of 3.0, 2.5, 2.0, and 1.5 percent).

TABLE G1.—ESTIMATED OPERATIONS OF OASI AND DI TRUST FUNDS BY ALTERNATIVE, CALENDAR YEARS 1988-2065  
(In billions)

Calendar year	Income, excluding interest	Interest	Total income <sup>1</sup>	Total outgo <sup>2</sup>	Assets at end of year
<b>Alternative I:</b>					
1988.....	\$256.0	\$8.0	\$264.1	\$221.9	\$110.9
1989.....	272.7	11.8	284.5	233.6	161.8
1990.....	296.8	16.4	313.2	246.5	228.5
1991.....	317.1	21.4	338.5	259.2	307.9
1992.....	336.0	26.6	362.7	270.9	399.6
1993.....	355.0	31.8	386.8	281.9	504.5
1994.....	374.3	36.7	411.0	292.9	622.6
1995.....	393.5	41.7	435.2	304.3	753.5
1996.....	413.7	47.5	461.2	316.2	898.5
1997.....	434.3	54.3	488.6	328.8	1,058.2
2000.....	509.1	79.9	589.1	370.6	1,653.1
2005.....	658.9	144.5	803.4	461.3	3,101.6
2010.....	842.2	246.4	1,088.6	605.3	5,238.2
2015.....	1,067.1	381.3	1,448.4	840.4	8,038.4
2020.....	1,344.1	543.4	1,887.5	1,179.8	11,381.4
2025.....	1,693.0	730.8	2,423.8	1,604.3	15,243.3
2030.....	2,142.3	952.6	3,094.9	2,094.5	19,838.7
2035.....	2,718.4	1,234.5	3,952.8	2,638.5	25,715.3
2040.....	3,446.4	1,616.3	5,062.8	3,248.7	33,710.9
2045.....	4,367.9	2,143.3	6,511.2	4,022.3	44,736.9
2050.....	5,542.5	2,859.0	8,401.5	5,051.0	59,682.7
2055.....	7,047.2	3,817.1	10,864.4	6,387.9	79,681.1
2060.....	8,970.3	5,099.2	14,069.4	8,070.4	106,444.0
2065.....	11,413.6	6,818.9	18,232.5	10,187.1	142,343.9
<b>Alternative II-A:</b>					
1988.....	255.4	8.0	263.4	222.4	109.8
1989.....	271.3	11.8	283.1	235.0	157.9
1990.....	295.6	16.4	312.0	250.1	219.8
1991.....	315.5	21.5	337.0	264.8	292.0
1992.....	335.4	26.8	362.2	278.4	375.8
1993.....	355.2	32.1	387.3	292.5	470.6
1994.....	375.8	37.5	413.4	307.1	576.9
1995.....	397.4	43.2	440.6	322.4	695.1
1996.....	420.3	49.4	469.7	338.4	826.5
1997.....	443.9	56.4	500.2	355.4	971.3
2000.....	526.3	81.2	607.5	411.0	1,507.7
2005.....	694.1	143.5	837.6	531.2	2,803.9
2010.....	903.8	243.5	1,147.2	718.5	4,710.6
2015.....	1,163.5	371.9	1,535.4	1,023.2	7,127.2
2020.....	1,484.6	513.5	1,998.1	1,472.9	9,754.5
2025.....	1,889.0	649.9	2,538.9	2,060.8	12,261.5
2030.....	2,407.2	768.3	3,175.5	2,772.8	14,424.1
2035.....	3,070.9	866.6	3,937.6	3,601.8	16,222.7
2040.....	3,908.0	950.9	4,858.8	4,566.9	17,774.2
2045.....	4,962.7	1,016.1	5,978.8	5,800.5	18,945.3
2050.....	6,298.7	1,027.4	7,326.0	7,445.0	19,042.1
2055.....	8,004.5	924.7	8,929.1	9,585.8	16,928.5
2060.....	10,181.7	641.1	10,822.8	12,280.1	11,360.7
2065.....	12,948.1	94.7	13,042.8	15,654.7	784.5
<b>Alternative II-B:</b>					
1988.....	254.7	8.0	262.7	222.4	109.1
1989.....	269.6	11.7	281.4	235.9	154.6
1990.....	293.3	16.3	309.5	252.2	211.9
1991.....	312.4	21.4	333.8	268.6	277.1
1992.....	333.4	26.8	360.3	285.2	352.1
1993.....	355.7	32.5	388.2	302.2	438.2
1994.....	379.0	38.5	417.4	319.8	535.9
1995.....	403.2	44.8	447.9	338.3	645.5
1996.....	429.3	51.6	480.8	357.8	768.5
1997.....	456.3	58.9	515.2	378.6	905.2
2000.....	547.9	83.6	631.5	446.8	1,409.4
2005.....	739.9	146.4	886.3	595.1	2,632.5
2010.....	987.4	250.5	1,237.9	825.8	4,460.6
2015.....	1,302.6	383.7	1,686.3	1,203.7	6,763.0
2020.....	1,703.0	523.2	2,226.2	1,775.4	9,124.3
2025.....	2,220.3	636.7	2,857.0	2,549.4	10,996.2
2030.....	2,898.7	692.0	3,590.7	3,524.5	11,837.5
2035.....	3,788.2	664.4	4,452.6	4,703.2	11,240.0
2040.....	4,937.8	532.8	5,470.6	6,121.7	8,840.4
2045.....	6,422.5	251.8	6,674.3	7,966.8	3,799.4
2050.....	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )

TABLE G1.—ESTIMATED OPERATIONS OF OASI AND DI TRUST FUNDS BY ALTERNATIVE, CALENDAR YEARS 1988-2065 (Cont.)  
[In billions]

Calendar year	Income, excluding interest	Interest	Total income <sup>1</sup>	Total outgo <sup>2</sup>	Assets at end of year
Alternative III:					
1988.....	\$251.6	\$7.9	\$259.5	\$223.1	\$105.2
1989.....	262.0	11.1	273.1	238.8	139.6
1990.....	287.1	14.9	302.1	259.1	182.6
1991.....	307.8	19.6	327.5	282.0	228.0
1992.....	322.1	23.7	345.8	305.3	268.6
1993.....	346.7	27.6	374.3	326.7	316.1
1994.....	373.1	31.5	404.6	349.4	371.3
1995.....	400.6	35.6	436.2	373.1	434.5
1996.....	429.3	40.0	469.2	398.2	505.6
1997.....	459.0	44.4	503.4	425.1	584.0
2000.....	557.5	58.0	615.5	510.1	872.0
2005.....	767.3	93.4	860.7	697.3	1,559.0
2010.....	1,042.8	153.5	1,196.3	991.4	2,528.9
2015.....	1,397.1	210.1	1,607.2	1,478.4	3,392.2
2020.....	1,850.6	208.1	2,058.7	2,235.9	3,229.3
2025.....	2,436.3	58.2	2,494.6	3,309.2	586.5
2030.....	(*)	(*)	(*)	(*)	(*)

<sup>1</sup>Total income consists of contributions, income from taxation of benefits, reimbursements from the general fund of the Treasury for the costs associated with special monthly payments to certain uninsured persons who attained age 72 before 1968 and also have fewer than 3 quarters of coverage, and interest income.

<sup>2</sup>Total outgo consists of benefit payments, administrative expenses, net transfers from the OASI and DI Trust Funds to the Railroad Retirement program under the financial-interchange provisions, payments for vocational rehabilitation services for disabled beneficiaries, and special monthly payments to certain uninsured persons who either attained age 72 before 1968 or who attained age 72 after 1967 and have at least 3 quarters of coverage for each year after 1966 and before the year of attainment of age 72.

\*The combined OASI and DI Trust Funds are estimated to be exhausted in 2048, under alternative II-B, and in 2026, under alternative III.

Table G2 shows these economic variables or functions thereof. The form of these tables is similar to that of the tables on trust fund operations, in order to facilitate constant-dollar calculations that may be of interest to economists and financial analysts. It is left to the individual analyst to decide which index to use to accomplish his or her particular purpose.

TABLE G2.—SELECTED ECONOMIC VARIABLES BY ALTERNATIVE, CALENDAR YEARS 1988-2065  
(GNP and taxable payroll in billions)

Calendar year	Adjusted CPI <sup>1</sup>	SSA average wage index <sup>2</sup>	Taxable payroll <sup>3</sup>	Gross national product	Compound interest-rate factor <sup>4</sup>
Alternative I:					
1988.....	100.00	\$18,835	\$2,086	\$4,780	1.0000
1989.....	103.20	19,849	2,225	5,112	1.0857
1990.....	106.32	20,925	2,369	5,470	1.1721
1991.....	109.18	21,978	2,526	5,824	1.2573
1992.....	111.57	22,971	2,676	6,161	1.3388
1993.....	113.79	23,958	2,826	6,504	1.4143
1994.....	116.07	24,972	2,979	6,850	1.4845
1995.....	118.39	26,009	3,132	7,200	1.5559
1996.....	120.76	27,085	3,291	7,568	1.6327
1997.....	123.17	28,213	3,457	7,954	1.7152
2000.....	130.71	32,104	4,041	9,275	1.9890
2005.....	144.32	39,816	5,207	11,907	2.5457
2010.....	159.34	49,381	6,633	15,133	3.2584
2015.....	175.92	61,244	8,367	19,065	4.1705
2020.....	194.23	75,957	10,482	23,887	5.3379
2025.....	214.45	94,204	13,146	29,960	6.8322
2030.....	236.77	116,835	16,594	37,820	8.7448
2035.....	261.41	144,902	21,045	47,968	11.1927
2040.....	288.62	179,712	26,701	60,862	14.3259
2045.....	318.66	222,884	33,863	77,188	18.3362
2050.....	351.83	276,428	42,976	97,963	23.4690
2055.....	388.44	342,834	54,642	124,558	30.0388
2060.....	428.87	425,193	69,561	158,568	38.4476
2065.....	473.51	527,338	88,525	201,800	49.2103

TABLE G2.—SELECTED ECONOMIC VARIABLES BY ALTERNATIVE,  
CALENDAR YEARS 1988-2065 (Cont.)  
[GNP and taxable payroll in billions]

Calendar year	Adjusted CPI <sup>a</sup>	SSA average wage index <sup>b</sup>	Taxable payroll <sup>b</sup>	Gross national product	Compound interest-rate factor <sup>c</sup>
<b>Alternative II-A:</b>					
1988.....	100.00	\$18,664	\$2,079	\$4,759	1.0000
1989.....	103.94	19,684	2,214	5,087	1.0896
1990.....	107.73	20,757	2,356	5,444	1.1828
1991.....	111.16	21,813	2,513	5,798	1.2768
1992.....	114.50	22,886	2,670	6,153	1.3681
1993.....	117.93	23,984	2,826	6,515	1.4567
1994.....	121.47	25,143	2,990	6,895	1.5437
1995.....	125.11	26,343	3,162	7,291	1.6324
1996.....	128.86	27,595	3,342	7,709	1.7255
1997.....	132.73	28,916	3,531	8,151	1.8240
2000.....	145.04	33,378	4,171	9,628	2.1463
2005.....	168.14	42,397	5,472	12,641	2.8152
2010.....	194.92	53,853	7,095	16,432	3.6924
2015.....	225.96	68,405	9,085	21,117	4.8430
2020.....	261.95	86,890	11,517	26,899	6.3522
2025.....	303.67	110,368	14,569	34,195	8.3316
2030.....	352.04	140,192	18,492	43,613	10.9278
2035.....	408.11	178,074	23,545	55,800	14.3330
2040.....	473.11	226,192	29,951	71,326	18.7994
2045.....	548.47	287,313	38,019	90,980	24.6575
2050.....	635.83	364,949	48,207	115,915	32.3410
2055.....	737.10	463,564	61,196	147,861	42.4189
2060.....	854.50	588,826	77,789	188,858	55.6371
2065.....	990.60	747,936	98,893	241,255	72.9744
<b>Alternative II-B:</b>					
1988.....	100.00	18,611	2,072	4,736	1.0000
1989.....	104.52	19,607	2,199	5,048	1.0928
1990.....	109.06	20,638	2,333	5,382	1.1922
1991.....	113.61	21,736	2,488	5,734	1.2966
1992.....	118.20	22,944	2,654	6,123	1.3996
1993.....	122.92	24,208	2,830	6,532	1.5052
1994.....	127.84	25,530	3,015	6,954	1.6111
1995.....	132.95	26,914	3,207	7,399	1.7193
1996.....	138.27	28,368	3,413	7,873	1.8314
1997.....	143.80	29,901	3,630	8,376	1.9467
2000.....	161.76	35,011	4,339	10,048	2.3238
2005.....	196.80	45,541	5,824	13,563	3.1215
2010.....	239.44	59,239	7,736	18,147	4.1930
2015.....	291.31	77,057	10,149	24,006	5.6324
2020.....	354.43	100,234	13,177	31,473	7.5659
2025.....	431.22	130,382	17,074	41,178	10.1631
2030.....	524.64	169,598	22,195	54,048	13.6520
2035.....	638.30	220,609	28,946	71,169	18.3385
2040.....	776.59	286,963	37,713	93,621	24.6338
2045.....	944.85	373,275	49,035	122,907	33.0901
2050.....	1,149.55	485,548	63,691	161,184	44.4494
2055.....	1,398.60	631,590	82,806	211,584	59.7081
2060.....	1,701.61	821,558	107,817	278,154	80.2049
2065.....	2,070.27	1,068,664	140,396	365,702	107.7379

TABLE G2.—SELECTED ECONOMIC VARIABLES BY ALTERNATIVE,  
CALENDAR YEARS 1988-2065 (Cont.)  
[GNP and taxable payroll in billions]

Calendar year	Adjusted CPI <sup>1</sup>	SSA average wage index <sup>2</sup>	Taxable payroll <sup>3</sup>	Gross national product	Compound interest-rate factor <sup>4</sup>
Alternative III:					
1988.....	100.00	\$18,315	\$2,042	\$4,632	1.0000
1989.....	105.89	19,331	2,136	4,901	1.0995
1990.....	112.70	20,553	2,282	5,287	1.2154
1991.....	119.78	21,752	2,448	5,652	1.3462
1992.....	125.73	22,756	2,558	5,891	1.4804
1993.....	132.36	24,273	2,757	6,397	1.6148
1994.....	138.98	25,688	2,963	6,878	1.7468
1995.....	145.93	27,202	3,183	7,372	1.8827
1996.....	153.23	28,799	3,408	7,891	2.0211
1997.....	160.89	30,489	3,646	8,439	2.1613
2000.....	186.25	36,210	4,404	10,254	2.6163
2005.....	237.71	48,229	6,018	14,154	3.5972
2010.....	303.38	64,237	8,133	19,359	4.9458
2015.....	387.20	85,559	10,823	26,102	6.8001
2020.....	494.17	113,958	14,213	34,778	9.3495
2025.....	630.70	151,784	18,556	46,063	12.8548
2030.....	804.96	202,165	24,211	60,974	17.6743
2035.....	1,027.35	269,268	31,628	80,810	24.3007
2040.....	1,311.19	358,645	41,213	106,826	33.4115
2045.....	1,673.45	477,689	53,453	140,563	45.9381
2050.....	2,135.79	636,246	69,098	184,334	63.1611
2055.....	2,725.87	847,432	89,281	241,630	86.8413
2060.....	3,478.97	1,128,716	115,520	317,170	119.3996
2065.....	4,440.15	1,503,365	149,556	416,566	164.1647

<sup>1</sup>The CPI used to adjust OASDI benefits is the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W), as defined by the Bureau of Labor Statistics, Department of Labor. The values shown are adjusted by dividing the average of the 12 monthly values of the CPI by the analogous value for 1988, and multiplying the result by 100, thereby initializing the CPI at 100 for 1988.

<sup>2</sup>The "SSA average wage index" is defined in section 215(i)(1)(G) of the Social Security Act; it is used in the calculations of initial benefits and the automatic adjustment of the contribution and benefit base and other wage-indexed program amounts.

<sup>3</sup>Taxable payroll consists of total earnings subject to OASDI contribution rates, adjusted to include deemed wages based on military service and to reflect the lower effective contribution rates (compared to the combined employee-employer rate) which apply to multiple-employer "excess wages."

<sup>4</sup>The compound interest-rate factor is based on the average of the assumed annual interest rates for special public-debt obligations issuable to the trust funds in the 12 months of the year, under each alternative. Each can be used to convert dollar values between July 1, 1988, and July 1 of the year shown.

The following table shows the tax income and outgo estimated based on the four alternatives for the OASDI, HI, and combined OASDI and HI programs. These items are defined in the footnotes to the table.

TABLE G3.—ESTIMATED OASDI, HI, AND COMBINED OASDI AND HI TAX INCOME AND OUTGO  
BY ALTERNATIVE,  
CALENDAR YEARS 1988-2060  
[In billions]

Calendar year	OASDI		HI		OASDI and HI	
	Tax income <sup>1</sup>	Outgo <sup>2</sup>	Tax income <sup>3</sup>	Outgo <sup>4</sup>	Tax income	Outgo
<b>Alternative I:</b>						
1988.....	\$256.0	\$221.9	\$62.8	\$54.1	\$318.8	\$276.0
1989.....	272.7	233.6	67.0	58.0	339.6	291.6
1990.....	296.8	246.5	71.3	63.7	368.1	310.3
1991.....	317.0	259.2	76.0	68.9	393.0	328.0
1992.....	336.0	270.9	80.5	73.7	416.5	344.6
1993.....	355.0	281.9	85.0	78.6	440.0	360.4
1994.....	374.3	292.9	89.6	83.5	463.9	376.3
1995.....	393.5	304.3	94.2	88.4	487.7	392.7
1996.....	413.7	316.2	98.9	93.3	512.7	409.5
1997.....	434.3	328.8	103.9	98.3	538.2	427.1
2000.....	509.1	370.6	121.5	115.3	630.7	485.9
2005.....	658.9	461.3	156.9	146.4	815.8	607.7
2010.....	842.2	605.3	200.6	184.6	1,042.8	789.9
2015.....	1,067.1	840.4	253.3	232.9	1,320.4	1,073.4
2020.....	1,344.1	1,179.8	317.3	304.1	1,661.4	1,483.9
2025.....	1,693.0	1,604.3	397.9	408.6	2,090.9	2,012.9
2030.....	2,142.3	2,094.5	502.2	549.0	2,644.5	2,643.5
2035.....	2,718.4	2,638.5	636.9	726.8	3,355.3	3,365.2
2040.....	3,446.4	3,248.7	808.1	947.4	4,254.5	4,196.1
2045.....	4,367.9	4,022.3	1,024.9	1,217.1	5,392.7	5,239.4
2050.....	5,542.5	5,051.0	1,300.7	1,561.2	6,843.2	6,612.3
2055.....	7,047.2	6,387.9	1,653.7	2,007.3	8,701.0	8,395.2
2060.....	8,970.3	8,070.4	2,105.3	2,584.4	11,075.5	10,654.8
<b>Alternative II-A:</b>						
1988.....	255.4	222.4	62.6	54.3	318.0	276.7
1989.....	271.3	235.0	66.6	58.8	338.0	293.9
1990.....	295.6	250.1	70.9	65.5	366.5	315.6
1991.....	315.5	264.8	75.6	71.7	391.1	336.5
1992.....	335.3	278.4	80.3	78.0	415.6	356.4
1993.....	355.2	292.5	85.0	84.7	440.2	377.2
1994.....	375.8	307.1	89.9	91.8	465.7	398.9
1995.....	397.4	322.4	95.0	99.3	492.4	421.6
1996.....	420.3	338.4	100.4	107.2	520.7	445.6
1997.....	443.8	355.4	106.1	115.3	549.9	470.7
2000.....	526.3	411.0	125.3	143.2	651.7	554.2
2005.....	694.1	531.2	164.7	200.3	858.8	731.4
2010.....	903.8	718.5	214.3	278.6	1,118.1	997.1
2015.....	1,163.5	1,023.2	274.7	390.1	1,438.2	1,413.3
2020.....	1,484.6	1,472.9	348.2	558.9	1,832.8	2,031.8
2025.....	1,889.0	2,060.8	440.5	803.6	2,329.4	2,864.4
2030.....	2,407.2	2,772.8	559.0	1,128.5	2,966.2	3,901.3
2035.....	3,070.9	3,601.8	711.8	1,525.7	3,782.7	5,127.5
2040.....	3,908.0	4,566.9	905.5	1,997.3	4,813.4	6,564.2
2045.....	4,962.7	5,800.5	1,149.4	2,568.3	6,112.1	8,368.8
2050.....	6,298.7	7,445.0	1,457.3	3,293.1	7,756.0	10,738.1
2055.....	8,004.5	9,585.8	1,850.0	4,227.0	9,854.5	13,812.8
2060.....	10,181.7	12,280.1	2,351.6	5,435.5	12,533.3	17,715.6
<b>Alternative II-B:</b>						
1988.....	254.7	222.4	62.4	54.3	317.1	276.7
1989.....	269.6	235.9	66.2	58.9	335.8	294.8
1990.....	293.2	252.2	70.2	65.7	363.5	317.9
1991.....	312.4	268.6	74.8	72.3	387.2	340.9
1992.....	333.4	285.2	79.8	79.2	413.3	364.4
1993.....	355.7	302.2	85.1	86.7	440.8	388.8
1994.....	379.0	319.8	90.6	94.7	469.6	414.5
1995.....	403.2	338.3	96.4	103.2	499.5	441.5
1996.....	429.2	357.8	102.5	112.3	531.8	470.1
1997.....	456.3	378.6	109.0	121.6	565.4	500.2
2000.....	547.9	446.8	130.5	154.1	678.4	600.9
2005.....	739.9	595.1	175.5	222.4	915.4	817.6
2010.....	987.4	825.8	233.9	319.3	1,221.3	1,145.1
2015.....	1,302.6	1,203.7	306.8	458.7	1,609.4	1,662.4
2020.....	1,703.0	1,775.4	398.3	673.0	2,101.3	2,448.4
2025.....	2,220.3	2,549.4	516.1	991.2	2,736.3	3,540.6
2030.....	2,898.7	3,524.5	670.8	1,424.9	3,569.5	4,949.4
2035.....	3,788.2	4,703.2	874.8	1,972.6	4,663.0	6,675.7
2040.....	4,937.8	6,121.7	1,139.8	2,643.9	6,077.6	8,765.6
2045.....	6,422.5	7,966.8	1,481.9	3,481.5	7,904.4	11,448.3
2050.....	8,349.7	10,465.0	1,924.8	4,571.1	10,274.5	15,036.1
2055.....	10,867.1	13,797.0	2,502.5	6,008.5	13,369.6	19,805.5
2060.....	14,159.3	18,109.0	3,258.3	7,913.1	17,417.6	26,022.2

TABLE G3.—ESTIMATED OASDI, HI, AND COMBINED OASDI AND HI TAX INCOME AND OUTGO  
BY ALTERNATIVE,  
CALENDAR YEARS 1988-2060 (Cont.)  
(In billions)

Calendar year	OASDI		HI		OASDI and HI	
	Tax income <sup>1</sup>	Outgo <sup>2</sup>	Tax income <sup>3</sup>	Outgo <sup>4</sup>	Tax income	Outgo
Alternative III:						
1988.....	\$251.5	\$223.1	\$61.5	\$54.2	\$313.1	\$277.3
1989.....	262.0	238.8	64.3	59.3	326.3	298.2
1990.....	287.1	259.1	68.7	67.6	355.8	326.7
1991.....	307.8	282.0	73.7	75.8	381.4	357.8
1992.....	322.1	305.3	77.0	83.8	399.1	389.1
1993.....	346.7	326.7	82.9	93.8	429.6	420.5
1994.....	373.1	349.4	89.0	105.2	462.1	454.6
1995.....	400.6	373.1	95.6	117.6	496.2	490.7
1996.....	429.3	398.2	102.3	131.0	531.6	529.1
1997.....	459.0	425.1	109.4	145.2	568.4	570.3
2000.....	557.5	510.1	132.2	196.2	689.7	706.3
2005.....	767.3	697.3	180.8	315.8	948.1	1,013.1
2010.....	1,042.8	991.4	245.1	505.2	1,288.0	1,496.5
2015.....	1,397.1	1,478.4	326.9	809.9	1,724.0	2,288.3
2020.....	1,850.6	2,235.9	429.2	1,301.3	2,279.8	3,537.2
2025.....	2,436.3	3,309.2	560.3	2,047.2	2,996.6	5,356.5
2030.....	3,201.5	4,736.3	731.0	3,068.1	3,932.5	7,804.4
2035.....	4,202.8	6,551.8	954.9	4,327.2	5,157.7	10,879.0
2040.....	5,493.7	8,843.0	1,244.2	5,806.4	6,737.9	14,649.4
2045.....	7,146.7	11,884.5	1,613.7	7,627.0	8,760.4	19,511.5
2050.....	9,273.2	16,049.7	2,085.9	9,965.6	11,359.1	26,015.3
2055.....	12,029.0	21,651.8	2,695.1	13,018.5	14,724.1	34,670.3
2060.....	15,612.5	28,942.0	3,487.1	17,037.6	19,099.7	45,979.6

<sup>1</sup>OASDI tax income consists of net OASDI contributions and income from taxation of benefits, on a cash basis.

<sup>2</sup>OASDI outgo consists of benefit payments, administrative expenses, net transfers from the OASDI and DI Trust Funds to the Railroad Retirement program under the financial-interchange provisions, payments for vocational rehabilitation services for disabled beneficiaries, and special monthly payments to certain uninsured persons who either attained age 72 before 1968 or who attained age 72 after 1967 and have at least 3 quarters of coverage for each year after 1966 and before the year of attainment of age 72. The OASDI outgo is on a cash basis.

<sup>3</sup>HI tax income consists of HI contributions (including contributions from railroad employment) and payments from the general fund of the Treasury for contributions on deemed wage credits for military service. The HI income is on an incurred basis.

<sup>4</sup>HI outgo consists of HI outlays for insured beneficiaries and administrative expenses. The HI outgo is on an incurred basis.

## APPENDIX H.—STATEMENT OF ACTUARIAL OPINION

It is my opinion that (1) the techniques and methodology used herein to evaluate the financial and actuarial status of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds are generally accepted within the actuarial profession; and (2) the assumptions used and the resulting actuarial estimates are, in the aggregate, reasonable for the purpose of evaluating the financial and actuarial status of the trust funds, taking into consideration the experience and expectations of the program.



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